Introduction
Mandibular arch defects following marginal resection compromises bony integrity and risks oral incompetence. Reconstruction often requires placement of hardware to stabilize the remnant mandible and soft-tissue to cover the bone and plate. Use of a mentalis transpositional flap and an inferior labialis advancement flap, along with application of a mandibular reconstruction plate, can effectively repair a mandibular arch defect and preserve oral competence.

Anatomy
The mentalis is a paired central muscle originating from the incisive fossae of the anterior mandible and inserting into the skin of the chin. The labialis is one component of the orbicularis oris. Its muscle fibers extend from the subcutaneous skin to the mucous membrane. Both muscles are innervated by branches of each facial nerve and derive their blood supply from the facial arteries.

Surgical Technique
Following resection of a malignant neoplasm of the mandibular arch (Fig. 1) and placement of a reconstruction plate (Fig. 2), the intra-oral defect is closed using a superiorly-based, bi-pedicled mentalis transpositional flap, first harvested trans-cervically, and following initial mobilization, trans-orally (Fig. 3). The mentalis flap is re-positioned intra-orally over the superior aspect of the mandibular arch and secured to the remnant floor of mouth musculature (Fig. 3). The lateral aspects of the flap are sutured to the free edges of the gingiva. A bi-pedicled inferior labialis sliding flap is then harvested, rotated, and advanced posteriorly, securing it to the underlying mentalis flap (Fig. 4). The labialis flap is sutured only as far back as necessary to pull the lower lip into proper alignment. The overlying mucous membrane is sutured to the labialis flap (Fig. 4). Oral competence is re-established if motor and sensory function to the orbicularis oris is preserved. Adequate bilateral perfusion assures flap viability.

Results
In addition to providing two-layer, soft-tissue coverage of exposed bone and hardware following marginal resection of the mandibular arch, intra-oral transposition of the mentalis and posterior advancement of the labialis corrects chin and lower lip laxity, preventing oral incompetence.

Conclusion
In conjunction with hardware to stabilize a mandibular arch defect, local mentalis and labialis flaps are as effective as regional and distant flaps in achieving a satisfactory functional and aesthetic outcome, while avoiding significant donor site morbidity.

Acknowledgment
The authors wish to acknowledge Carolina Hrejsa, CMI for the illustrations, layout, and design of this poster.